

Abstract

Device for measuring human blood sugar levels with a catheter, the free end of which is positioned in a blood vessel, wherein the catheter consists of at least one optical waveguide comprising a light source for coupling light into the at least one optical waveguide, a measurement point at the free end of the catheter at which point the light is emitted from the at least one optical waveguide, wherein the light is dispersed by the blood and/or transmitted by the blood and wherein the dispersed and/or transmitted light is coupled again into the minimum of one return optical waveguide, a detector to receive the light which is returned, and a computer unit for analysing the light received by the detector. Provision is made for a cleansing device to be located at the point of measurement for removing the tissue particles deposited from the blood in order to provide a device which is as accurate as possible and which delivers constant measurement values over time for blood sugar levels which can be used as the basis for further data analysis.

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